



UNITED STATES PATENT AND TRADEMARK OFFICE

MN

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,116	07/15/2003	Eric Horvitz	MS127735.2/MSFTP263USA	8638
27195 7590 06/04/2007 AMIN. TUROCY & CALVIN, LLP 24TH FLOOR, NATIONAL CITY CENTER 1900 EAST NINTH STREET CLEVELAND, OH 44114			EXAMINER WOO, ISAAC M	
			ART UNIT 2166	PAPER NUMBER
			MAIL DATE 06/04/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/620,116

Applicant(s)

HORVITZ, ERIC

Examiner

Isaac M. Woo

Art Unit

2166

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-55 is/are pending in the application.
- 4a) Of the above claim(s) 22-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-21 and 40-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 19, 2007 has been entered.
2. Claims 5, 19, 40-41, 45 and 50-51 are amended. Claims 1-4 are canceled. Claims 22-39 are withdrawn. Claims 5-21 and 40-55 are presented for examination for this office action.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2166

4. Claims 5-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Helfman et al (U.S. Patent No. 6,396,513, hereinafter, "Helfman").

With respect to claim 5, Helfman teaches implicitly training the probabilistic-based classifier to infer a priority level of a received item based in part on at least one of current or historical information of at least a focus of attention of a user that are indicative of item priority levels (i.e., oldest unread emails are classified and prioritized, col. 3, lines 1-67 to col. 4, lines 1-29), the focus of attention comprising at least one of keyboard activity or mouse activity, or a combination thereof, associated with the user (i.e., oldest unread mail (no user activity), col. 4, lines 30-57); determining a priority level of the received item utilizing the probabilistic-based classifier (i.e., oldest unread mail (no user activity) are classified as high priority, col. 4, lines 30-57, col. 6, lines 5-60); and utilizing the priority level to facilitate electronic communication (col. 6, lines 5-60).

With respect to claim 6, Helfman teaches at least one of a Bayesian classifier or a support-vector machine classifier, or a combination (col. 4, lines 30-57, col. 6, lines 5-60).

With respect to claims 7, and 18, Helfman teaches classifier is explicitly or implicitly trained (col. 4, lines 30-57, col. 6, lines 5-60).

With respect to claim 8, Helfman teaches the explicit training is performed during initial phases of constructing the probabilistic-based classifier (col. 4, lines 30-57,col. 6, lines 5-60).

With respect to claim 9, Helfman teaches the predefined data set employed for explicitly training the probabilistic-based classifier comprises a training set to discriminate between time-critical and non-time-critical items (col. 4, lines 30-57,col. 6, lines 5-60).

With respect to claim 10, Helfman teaches explicitly training the probabilistic-based classifier comprises utilizing feature selection (col. 4, lines 30-57,col. 6, lines 5-60).

With respect to claim 11, Helfman teaches the feature selection includes a mutual information analysis (col. 4, lines 30-57,col. 6, lines 5-60).

With respect to claim 12, Helfman teaches feature selection operates on single words (col. 2, lines 5-65).

With respect to claim 13, Helfman teaches the feature selection operates on phrases (col. 2, lines 5-65).

Art Unit: 2166

With respect to claim 14, Helfman teaches the feature selection operates on parts of speech (col. 2, lines 5-65).

With respect to claim 15, Helfman teaches the feature selection employs high-level patterns (col. 2, lines 5-65).

With respect to claim 16, Helfman teaches the feature selection utilizes tokens (col. 2, lines 21-64).

With respect to claim 17, Helfman teaches the feature selection utilizes tagged text to discriminate features of the received item (col. 3, lines 1-67 to col. 4, lines 1-64).

With respect to claim 19, Helfman teaches implicitly training the probabilistic-based classifier based on at least one of current or historical information of at least one of user presence or a focus of attention of a user (col. 3, lines 1-67 to col. 4, lines 1-64).

With respect to claim 20, Helfman teaches implicitly training the probabilistic-based classifier based at least in part on an assuming assumption that time-critical items are reviewed prior to non-time-critical items (col. 3, lines 1-67 to col. 4, lines 1-64).

With respect to claim 21, Helfman teaches continually updating the probabilistic-based classifier via the implicit training (col. 3, lines 1-67 to col. 4, lines 1-64).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 40-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Helfman et al (U.S. Patent No. 6,396,513, hereinafter, "Helfman") in view of Theimer et al (U.S. Patent No. 5,812,865, hereinafter, "Theimer").

With respect to claim 40, Helfman teaches determining a loss function based on an expected cost in lost opportunities as a function of an amount of time delayed in reviewing an item after the item has been received (i.e., oldest unread emails are classified and prioritized, col. 3, lines 1-67 to col. 4, lines 1-29, fig. 4-6), classifying priority of the item based in part on the loss function utilizing a trained classifier (col. 3, lines 1-67 to col. 4, lines 1-29, fig. 4-6); and utilizing the classified priority of the item to infer a desired computer-based automated action to take to facilitate electronic communication (col. 2, lines 1-63). Helfman does not explicitly disclose an opportunity to attend a meeting at a specified time. However, Theimer teaches sending a reminding

Art Unit: 2166

message to a user for meeting schedule according to time proximity (col. 23, lines 18-39). Therefore, based on Helfman in view of Theimer, it would have been obvious to a person having ordinary skill in the art at the time of the invention was made to utilize the teaching of Theimer to system of Helfman in order to provide reminding message to a user for meeting when time approaching to schedule to help user's schedule management.

With respect to claim 41, Helfman teaches at least one of a Bayesian classifier or a support-vector machine classifier, or a combination (col. 4, lines 30-57,col. 6, lines 5-60).

With respect to claim 42, Helfman teaches trained classifier classifies the priority of the item based on a loss function (col. 4, lines 30-57,col. 6, lines 5-60).

With respect to claim 43, Helfman teaches the loss function is determined based on an expected cost in lost opportunities as a function of an amount of time delayed in reviewing the item after it has been received (col. 4, lines 30-57,col. 6, lines 5-60).

With respect to claim 44, Helfman teaches the loss function is determined based on a type of the item (col. 4, lines 30-57,col. 6, lines 5-60).

With respect to claim 45, Helfman teaches the loss function is at least one of a linear loss function or a non-linear loss function, or a combination (col. 4, lines 30-57,col. 6, lines 5-60).

With respect to claims 46 and 52, Helfman teaches classifier is explicitly or implicitly trained (col. 4, lines 30-57,col. 6, lines 5-60).

With respect to claim 47, Helfman teaches the explicit training is performed during the construction of the trained classifier (col. 2, lines 1-63).

With respect to claim 48, Helfman teaches the predefined data set employed for explicitly training the probabilistic-based classifier comprises a training set to discriminate between time-critical and non-time-critical items (col. 4, lines 30-57,col. 6, lines 5-60, col. 2, lines 1-63).

With respect to claim 49, Helfman teaches explicitly training the probabilistic-based classifier comprises utilizing feature selection (col. 4, lines 30-57,col. 6, lines 5-60, col. 2, lines 1-63).

With respect to claim 50, Helfman the feature selection operates on at least one of single words, phrases, or parts of speech, or a combination (col. 2, lines 21-64, col. 3, lines 6-67 to col. 4, lines 1-60).

With respect to claim 51, Helfman the feature selection utilizes tagged text to discriminate features of the received item (col. 2, lines 21-64, col. 3, lines 6-67 to col. 4, lines 1-60).

With respect to claim 53, Helfman teaches at least one of current or historical information of at least one of user presence, activity of a user, or a focus and attention of the user (col. 2, lines 21-64, col. 3, lines 6-67 to col. 4, lines 1-60).

With respect to claim 54, Helfamn teaches at least in part on an assumption that time-critical items are reviewed prior to non-time-critical items (col. 2, lines 21-64, col. 3, lines 6-67 to col. 4, lines 1-60).

With respect to claim 55, Donahue teaches the trained classifier is continually updated via the implicit training (col. 2, lines 21-64, col. 3, lines 6-67 to col. 4, lines 1-60).

Art Unit: 2166

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac M. Woo whose telephone number is (571) 272-4043. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Isaac Woo', with a long horizontal flourish extending to the right.

Isaac Woo
June 1, 2007